

Code	Measure Name	Reduction potential	% of goal (2020)	Implementation period	Implementation cost (annual)	Cost to	Savings to	Net annual savings	Linkage to other measures	City role	Partners needed	Recommendation
E15	Electricity Carbon Surcharge	funding mechanism for other measures								Introduce ballot measure to increase tax rate on utility bills	none	Include, but needs work
G10a/b	Solar Hot Water - Private/Public Pools	1,305	0.06	10 years	\$120 (residential)	Developers	Homeowner/ Building tenant	\$705	G22	Require by ordinance for new construction	none	
G1	Mandatory Use of Green Concrete	17,473	N/A	10 years	Saves \$1/short ton	N/A	Developers	\$1/short ton	G22	Require by ordinance for new construction	none	
G9	Mandatory C&D Recycling	5,557	0.25	10 years		Developers			G22	Require by ordinance an increased construction and demolition recycling diversion rate	none	
G8	Mandatory Cool/Energy Star Roofing	84,359	3.7	10 years	minimal (\$0.05/sqft)	N/A	Homeowner/ Building tenant	\$216/home	G22	Require by ordinance for new construction	none	Include
G22	Expand Green Building Program/ Energy Codes	114,235	5	10 years	\$5.4 million	Developers	Homeowner/ Building tenant	\$8.6 million	many	Adopt the 2012 IECC starting January 1, 2013	none	Include, City already planning to do
G2a	Commercial PV	72,528	3.2	20 years	\$2,012 (small)/ \$44,673 (large)	Business/property owner	Building tenant	\$4,564 (small)/ \$42,330 (large)	E7	Remove regulatory barriers, outreach/education	TEP	Include, but needs work
G2c	Commercial Thermal	3,600	0.16	20 years		Developers	Building tenant	\$162/system	G22	Require by ordinance for new construction	none	
G6a	Enhanced Direct Load Control in Commercial Buildings (fka Smart Meters)	33,301	1.47	2 years (retrofits)	\$10,133	C/I building owners	Building tenant	\$8.32 million	E7	Require by ordinance for new construction, encourage retrofits for existing	TEP	Include
G4, a, b	Increased Commercial Recycling	14,448	0.64	10 years		City of Tucson	Commercial recyclers		E7	Continue expanded outreach (and waste audits) to businesses	none	
G23	Non-residential Water Conservation	4,056	0.18	10 years	none	Higher water using business	Lower water using businesses	N/A	none	Create water conservation rates for commercial/industrial customers	none	Work with Tucson Water
E7	Climate Challenge for Business	13,953	0.6	10 years	\$1.08 million	City of Tucson (\$450,000 to administer), \$1.3 million business investment	Businesses that participate	\$443,459	many	Design and implement program	none	
E14/E23	Community Climate Challenge (Energy Efficiency Education Program)	7,884	0.35	10 years	\$33,311	City of Tucson	Homeowner	\$16.35/home	E7 Climate Wise	Design and implement program	none	Include, expand into broad outreach/education
E2, E3, E16, E17	Rental Housing Energy Efficiency Initiative	15,650	0.7	10 years	\$910,000	Rental unit owners	Renters or Landlords	\$86,667	E7	Require by ordinance energy disclosure to tenants and requiring energy efficiency retrofits upon resale; also education program	none	Include disclosure element, consider requiring/incenting Smart Meters, work with industry on retrofit at resale
G17	Time-of-Sale Residential Energy Efficiency Retrofits	11,973	0.5	10 years	\$13.49 million	Home buyers/sellers	Home buyers	\$17 million	none	Require by ordinance	none	Include, but needs work
G14, G14a/b	Expanded Residential Energy Efficiency	47,143	2	10 years	\$1.345 million	Homeowner (\$1.32 million), City (\$25,000)	Homeowner	\$1.6 million	G17	Design and implement program	none	Include, group with G22 and G17
E10	Promotion of Energy Efficiency Through New Construction Permitting	45,111	2	10 years	\$1.7 million	Purchasers of AC units	Homeowner	\$1.7 million	G22	Mandate Energy Star air conditioners in new home construction	none	Include
E13	Appliance Efficiency Initiative	11,428	0.5	10 years	\$413,000	City of Tucson (unless fees fund rebates)	Homeowners	\$258,467	E14/23 and/or E10	Design and implement program	none	Include, but consider mandating
G2b	Enhanced Direct Load Control in Residential (fka Smart Meter)	125,000	5.5	10 years	\$7 million	TEP	Homeowners	\$15 million	E14/23	Remove regulatory barriers, outreach/education	TEP	Include, but needs work
G2e	Residential PV	29,104	1.3	10 years	\$3.465 million	Homeowner	Homeowner	\$976/home	E14/E23 Community Climate Challenge	Remove regulatory barriers, outreach/education	none	Include as outreach/education, further City role pending federal action
G2d	Residential Thermal (assuming all electric water heaters)	82,908	3.7	10 years	\$108/home (* 372 homes) = \$40,176	Homeowners	Homeowners	\$162/home	none	Require by ordinance for new, increase access to low-interest financing		Include
	Residential Thermal (assuming 50/50 gas and electric water heaters)	55,000										
T6	Transit Oriented Development (fka Smart Growth Initiative)	11,947	0.53	10 years	N/A		Taxpayers, City	\$18.8 million	none	Adopt incentives and regulations to influence land use and transportation patterns	various	Measure revised based on previous input
T13	Intersection Roundabouts	987	0.04	8 years	none	N/A	Vehicle owners	\$495,000	none	Plan, design, and construct 3 roadway roundabouts	none	Little GHG reduction, but support for co-benefits
T10	Vehicle Maintenance and Behavior Education Program	41,856	1.85	10 years	\$100,000	City of Tucson	Vehicle owners	\$16.8 million	none	Design and implement program	none	Include
T20	Anti-idling Ordinance	15,188	0.7	10 years	minimal	City of Tucson	Vehicle owners	\$5.1 million	none	Require by ordinance	none	
T5	Voluntary Travel Carbon Offset Program	297,397	13.1	10 years	\$330,000	City of Tucson or donations	N/A	N/A	T10 and E14/23	Design and implement program	none	Include, but needs work
T7	Purchasing Incentives for Zero Emission Vehicles and Plug-In Hybrid Vehicles	10,780	0.48	10 years	revenue neutral feebate system	N/A	Zero emission/PHEV owners	\$650,000	none	Establish fee system and use to provide rebates for zero-emission or PHEV vehicle purchase	none	Include, but needs work
T19	Car Sharing Program	5,000	0.2	10 years	\$25,000	City of Tucson	Car Sharing members	\$17.3 million	none	Remove regulatory barriers, outreach/education	Private business or non-profit	Wrap into TOD measure
T19	Bike Share	921	0.04	10 years	\$205,000	Various options	N/A	\$497,000	none	Pilot/implement program	Private business or non-profit	Little GHG reduction, but support for co-benefits
T21	Double Bike Lane Usage	16,084	0.71	10 years	N/A	N/A	Cyclists	\$6.5 million	none	Support existing bike efforts and continue to pursue Platinum Bicycle Friendly Community	none	Little GHG reduction, but support for co-benefits
E1, E1b, E19a	Warm Mix Asphalt	1,420	N/A	10 years	none	N/A	City of Tucson	\$61,000	none	Change asphalt used by City	none	
E22	Residential Solar Street Lights	176	0.01	10 years	none	City of Tucson	City of Tucson	\$16,768	G3, E21/b	Install solar-powered LED streetlights instead of traditional for new streetlights	none	
G3, E21/b	Enhanced LED Street Lighting Initiative	520	0.02	8 years	\$113,000	City of Tucson	City of Tucson	\$150,000	E22	Replace all 8,222 residential streetlights with LED	none	
T3	Enhanced Energy Efficiency of the City of Tucson Vehicle Fleet	1,051	0.05	10 years	none	N/A	City of Tucson	\$575,000	none	Replace vehicles at replacement age with vehicles that meet or exceed current US fleet CAFÉ standards	none	
E12	City of Tucson Energy/Water Performance Contracting	10,471	0.46	10 years	\$384,500	ESCO, paid back by City of Tucson	ESCO and Government	\$2.023 million	none	Utilize EPC to upgrade city facilities	ESCO	
T2	City of Tucson Telework Program	706	0.03	10 years	none	N/A	Employees	\$309,000	none	Design and implement program	none	